

A nurturing care-based intervention for autism spectrum disorder : A case report

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Received : 04 JULY 2025; Accepted: 23 SEPTEMBER 2025

Abstract

Autism Spectrum Disorder (ASD) is a heterogeneous neurodevelopmental condition characterized by deficits in social communication and the presence of restricted, repetitive behaviors. Current intervention models often emphasize symptom reduction and isolated skill acquisition, frequently overlooking the foundational developmental prerequisites necessary for meaningful, generalizable progress. These essential early developmental capacities- reflecting typical developmental processes are significantly shaped by nurturing care in the early years of life. Nurturing care is recognized as a fundamental pathway for supporting developmental needs and realizing the full potential of all children, including those with neurodevelopmental disorders. This case study presents a 4-year old boy with ASD who exhibited limited social engagement, anxiety, behavioral dysregulation and communication delay. He was enrolled in the New Horizons Developmental Program (NHDP), a structured, multidisciplinary framework grounded in the New Horizons Social Behavior and Communication (NHSBC) sequence and the Theory of Selective Human Engagement (SHE). The program prioritizes the importance of nurturing care in early developmental capacities such as social reciprocity, emotional regulation and adaptive functioning prior to targeting academic or speech-based outcomes.

A defining feature of the intervention was intensive parental coaching, enabling caregivers to implement individualized, context-sensitive strategies embedded within daily routines. The program also included consultation with the developmental pediatrician, which involved defining the child's program. This was followed by intervention planning for each session, structured engagement with the child, monthly outpatient follow-up visits and quarterly progress reports. Over a 16-month period, the child demonstrated improvements in reciprocal social interactions, emotional regulation, communicative competence and group participation. Notably, he transitioned from echolalic utterances to meaningful, purposeful conversations; reflecting a developmental profile consistent with age-appropriate expectations.

By rooting each intervention in developmental principles and real-life contexts of nurturing care, the program ensured relevance across varied environments. The child's progress highlights that meaningful learning in autism emerges most

How to cite this article:

Khan S, Sookhadwala H, Mullaji S, Ghag I, Dalwai SH. A Nurturing Care-Based Intervention for Autism Spectrum Disorder : A Case Report. 2025;Vol 3(3):31-34. <https://doi.org/10.5281/zenodo.17271365>

Keywords:

- autism
- nurturing care
- intervention
- neurodevelopmental disorders
- parental coaching

effectively within natural settings- through daily routines, responsive caregiving and strategies aligned with the child's innate developmental path. Such an approach supports more sustainable developmental outcomes in children with ASD.

Introduction

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by persistent deficits in social communication and interaction, alongside restricted, repetitive patterns of behavior, interests, or activities.^[1] The etiology of ASD is multifactorial, involving a synergistic interplay between genetic predispositions and environmental influences. Genetic factors contribute significantly to ASD risk. Environmental factors, particularly those affecting the prenatal and perinatal periods- such as advanced parental age, maternal health conditions and exposure to environmental toxins may further modulate this risk through epigenetic mechanisms.^[2]

In India, the prevalence of ASD among children has been estimated at approximately 1% in those aged 2-6 years and 1.4% in those aged 6-9 years, though these figures may underrepresent the true prevalence due to limited large-scale epidemiological studies.

^[3] Given the heterogeneity in ASD presentations and individual developmental trajectories, intervention strategies must be both individualized and holistic. Traditional therapeutic models often focus on surface-level behavior management and isolated skill acquisition, potentially disregarding foundational social and adaptive functioning. These essential early developmental capacities- reflecting typical developmental processes are significantly shaped by nurturing care in the early years of life. Nurturing care is recognized as a fundamental pathway for supporting developmental needs and realizing the full potential of all children, including those with neurodevelopmental disorders (NDDs).

^[4, 5] While every child requires nurturing care to thrive, children with NDDs benefit from more intensive nurturing care strategies, as they face a greater risk of suboptimal developmental outcomes. Comprehensive approaches that integrate multidisciplinary interventions and culturally sensitive, nurturing care strategies are essential to support developmental milestones and address core deficits in children with ASD. This intervention model prioritizes the contextual application and

integration of skills, moving beyond traditional symptom-focused models. This case study illustrates the efficacy of such an intervention program in facilitating social engagement, communication and adaptive behaviors.

Case Description

A 4-year old boy diagnosed with ASD demonstrated limited social engagement, fleeting eye contact, echolalia and stereotypic behaviors, such as jumping when excited. The child exhibited high levels of anxiety in both familiar and unfamiliar settings and was largely disengaged from peers. Behavioral challenges included temper tantrums triggered by unmet demands with hyperactivity and difficulty sustaining attention. Communication was limited to a few kinship terms and he required caregiver assistance for most of the activities of daily living (ADLs). His school reports reflected these challenges, highlighting issues with emotional regulation and classroom participation. On evaluations, he met the DSM-5 criteria for ASD, Severity Level 1 with a GARS-3 Autism Index score of 66 and exhibited delayed speech and language development.

Having enrolled in the New Horizons Developmental Program (NHDP) provided a guided approach which is based on the New Horizons Social Behavior and Communication (NHSBC) sequence and the Theory of Selective Human Engagement (SHE).^[6] This framework prioritizes social reciprocity and emotional regulation before addressing speech or academic outcomes. A key component of the intervention was the active involvement of parents as facilitators of their child's development. It comprised both child-focused sessions and parental coaching to ensure comprehensive support. The program also included consultation with the developmental pediatrician, which involved defining the child's program. This was followed by intervention planning for each session, structured engagement with the child, monthly outpatient follow-up visits and quarterly progress reports. Through structured coaching, parents were guided to implement home-based strategies based on individualized goals set by the developmental pediatrician, each carefully aligned with the child's unique developmental trajectory. The intervention program was thoughtfully curated considering the family's daily routines, cultural background

and caregiving capacity, ensuring that strategies were both practical and sustainable within the unique dynamics of their home environment. The initial phase of the intervention prioritized the stabilization of the child's social-emotional reciprocity and behavioral regulation. To create an environment conducive to developmental progress, six core principles were implemented: removal of screen exposure, elimination of packaged foods and sweets, incorporation of regular physical activity, reduction of afternoon naps to encourage consistent nighttime sleep, temporary deprioritization of academic tasks and the use of a parent-maintained diary to monitor progress, challenges and evolving strategies. Rather than depending exclusively on formal therapy sessions, the approach embedded learning opportunities within the nuances of daily tasks. As the intervention progressed, gradual but consistent improvements were observed. The child's social anxiety decreased and he began initiating interactions with extended family members and strangers. He demonstrated increased comfort in adapting to new environments and routines, with fewer behavioral outbursts and improved emotional regulation. These advancements were complemented by improvements in social skills such as social referencing and emotional expression. There was a noticeable increase in sitting tolerance and participation in group activities.

Six months into the program, the child began to combine words into meaningful two- to three-word phrases, marking a significant milestone in communication development. He initiated simple, purposeful conversations with no echolalic utterances, particularly in familiar settings. Initially struggling with turn-taking, sharing and grasping basic social norms, he gradually developed the ability to engage in cooperative play, adhere to game rules and interact reciprocally with peers. These emerging skills laid a strong foundation for successful integration into group activities and adaptation across varied social settings. This was followed by a significant progress in communicative competence, with the child expressing preferences, narrating events and engaging in basic conversations with both adults and peers now. After 16 months of intervention, the child not only showed significant social adaptation but also developed age-appropriate cognitive and

learning skills, establishing a solid foundation for his academic progression. He actively participated in home routines, classroom activities and play, exhibiting a developmental profile that aligned with his age.

Discussion

Over the years, interventions for children with autism have predominantly focused on behavioral strategies, educational support, speech therapy and occupational therapy. While these approaches have brought measurable benefits, autism treatment has largely remained confined to a symptom-focused framework, often overlooking the developmental prerequisites that shape long-term outcomes. Although these methods can help manage surface-level behaviors, they often fail to address the root causes driving them. Without mastering earlier stages, children may struggle to achieve genuine proficiency in more advanced domains. For instance, speech therapy may improve articulation and grammar and occupational therapy can enhance fine motor and sensory processing.^[7] However, if these interventions do not consider the real-life context in which these skills are used, their impact may be limited. The NHDP addresses these gaps by emphasizing developmentally aligned interventions integrated with parental coaching. By grounding each intervention in developmental logic and real-world application, the intervention program ensures their contextual application across different environments.

Conclusion

This case exemplifies a paradigm shift in autism intervention by emphasizing foundational developmental milestones over isolated skill acquisition. By integrating multidisciplinary strategies and emphasizing active parental involvement, it illustrates the effectiveness of a well-structured, evidence-based approach that prioritizes human engagement and social adaptation over conventional, symptom-targeted therapies. The child's progress reinforces the understanding that meaningful learning in children with ASD unfolds within their natural environments- through everyday routines, responsive caregiving and interventions aligned with the innate trajectory of development. This approach promotes sustainable developmental outcomes in children with autism.

Conflict of Interest

None

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